

ABSTRACT OF THE DISCLOSURE

A microscope arrangement for simultaneously inspecting a plurality of spots on the surface of a substrate includes at least one source of substantially parallel illumination directed non-parallel to the optical axis, an optical arrangement configured for directing the substantially parallel illumination to illuminate spaced apart spots on the surface of the substrate and for returning radiation from the spots, and an array of optical sensors. The optical arrangement includes an array of reflectors located and angled so as to generate an array of spaced illumination beams generally parallel to the optical axis, each reflector reflecting at least 90% of incident radiation intensity. Each of the optical sensors is spatially associated with a corresponding at least one of the reflectors so as to receive at least part of the radiation returned from the spot illuminated by the corresponding reflector.